Integral inequalities for superquadratic functions on time scales

(Talk)

Josipa Barić
Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split
jbaric@fesb.hr

(joint work with R. Bibi, M. J. Bohner and J. Pečarić)

The theory of time scales was intruduced by Stefan Hilger in his PhD thesis in 1988 as a unification of the theory of difference equations with that of differential equations, unifying integral and differential calculus with the calculus of finite differences. In the present research Jensen's inequality on time scales for superquadratic functions is obtained. Using two different approaches in proving it, it is shown that some new inequalities for time scales integrals and superquadratic functions, that are refinements of classical inequalites on time scales, can be proved easily using properties of superquadratic functions and some known results for isotonic linear functionals.

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